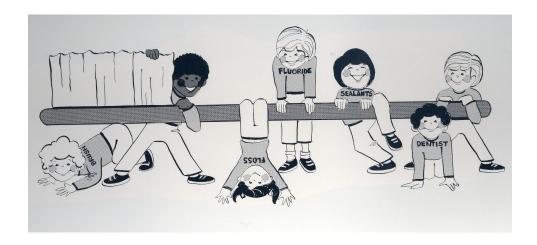
Make Your Smile Count

Utah Oral Health Survey 2005



Utah Department of Health Division of Community and Family Health Services Oral Health Program



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Peggy Bowman, RDH Shaheen Hossain, PhD Gail Rapp, MS Rob Satterfield, MStat Steven Steed, DDS Karen Zinner, MPH

For more information, contact the Oral Health Program at 801-538-9177.

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Introduction

According to the Surgeon General's Report on Oral Health:

- Dental caries is the single most chronic childhood disease five times more common than asthma and seven times more common than hay fever.
- Oral diseases and conditions are associated with other health problems.
- Over 50% of five to nine year old children have at least one cavity or filling.
- There are striking disparities in dental disease by income. Poor children suffer twice as much dental caries as their more affluent peers, and their disease is more likely to be untreated.
- Uninsured children are 2.5 times less likely than insured children to receive dental care.
- More than 51 million school hours are lost each year to dental-related illness. Pain and suffering due to untreated diseases can lead to problems in eating, speaking and learning.
- Safe and effective measures exist to prevent dental caries and periodontal disease.*

Previous Utah studies have shown that for eight year old children 5.2% had sealants and 37% had caries experience in their permanent teeth in 1982. There were 28% of eight year old children who had at least one sealant in 1987. In 1996, 43% of eight year olds had sealants and 65% of six to eight year olds had caries experience in their permanent or primary teeth. In 2000, 58% of the six to eight year old children had caries experience, 22% of the children had untreated decay, and 2% of the children had urgent dental needs. Fifty percent of the eight year old children had sealants. In 2000 the local health districts with the lowest untreated decay rates were Bear River, Weber-Morgan and Central; the lowest caries experience rates were Summit, Bear River and Southwest; and the highest sealant placement rates were Summit, Tooele, and Weber-Morgan.

The Oral Health Program (OHP), Utah Department of Health (UDOH), surveyed six to eight year old children during Fall 2005 to determine their oral health status. The results of this survey will be shared with appropriate policy makers, be available to OHP partners, and determine future OHP activities.

As in 2000, the decision was made to use the Association of State and Territorial Dental Directors (ASTDD) "Basic Screening Surveys: An Approach to Monitoring Community Oral Health" protocol. This protocol gathers data concerning dental care access, caries present, caries experience, sealants present, and treatment urgency. These data correspond to the Healthy People 2010 Objectives. Therefore, our results will be comparable to other states' data and relate to HP2010 Objectives.

^{*} US Department of Health and Human Services. Oral Health in America: A Report of the Surgeon General – Executive Summary. Rockville, MD:US Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.

Methods

Pre-screening

The ASTDD protocol was selected as the most appropriate screening methodology. The Institutional Review Board of the Utah Department of Health approved the protocol. The screening supplies were purchased and forms were printed. The database was developed using the MS Access software which was loaded into a laptop computer for the data collection of the questionnaire and the screening results.

A stratified random sample of schools was selected to reflect local health district results. Thirty-five schools were selected. (See Appendix) The schools chosen were a subset of schools that were also participating in a UDOH height/weight survey. One classroom each of first, second and third grades were identified for screening. The classroom was identified using the teacher's last name that was closest to the letter A.

Permission to conduct the screening was requested from the school district superintendents. A copy of this letter was mailed to the appropriate school principal. (See Appendix) Two school district superintendents, Davis and Granite School Districts, did not grant permission to conduct the survey. After the remaining superintendents granted permission to do the screenings, a second packet was mailed to the principal with a letter confirming involvement in the screening and permission slips for the three classrooms. A copy of this letter was mailed to the local health officers informing them of the scheduled screening. (See Appendix) The permission slips were to be sent home with the child along with registration materials. A letter requesting assistance on the day of the screening was mailed to the school nurse or local health department nursing director. (See Appendix) The principal was called one week prior to the screening to confirm details.

Permission slips included demographic information, access to care information, and permission to participate. The parent had the option to grant permission to participate while not requiring response to the access to care questions. A letter to the parents on the reverse side of the permission slip explained the purpose of the screening, the procedure, the child's anonymity, and that the screening did not take the place of a regular dental check-up. The materials were printed in English and Spanish. (See Appendix)

The screeners, a dentist and a dental hygienist from the Oral Health Program, were trained via the ASSTD video and manual on screening protocol to ensure inter-rater reliability. During the screening process, the two screeners showed agreement as to caries, caries experience, sealants and urgency of treatment.

Screening

On the day of the screening, the screener and recorder arrived at the school one-half hour before the scheduled starting time to set up the equipment. An Aseptico portable dental chair and dental light were used. A laptop computer was used to enter the responses to the questions on the permission slip and the results of the screening. In addition to the

dental equipment, a large table or two smaller desks and two chairs were set up for the screening.

Disposable mirrors and tongue blades were used for retraction and visualization. No x-rays were taken. Gauze squares and cotton tipped applicators were available to dry the teeth or remove food, if needed. Children screened directly after eating were requested to rinse their mouths before coming into the screening. A new pair of gloves was used on each child.

The recorder entered the information from the permission slip and the results of the screening into the database. The recorder also entered the child's results on the Report of Dental Screening form which was sent home with the child to the parents. (See Appendix)

The screener would indicate the following information:

Untreated decay

Yes

No

Treatment urgency

None

Early dental care

Urgent care

Caries experience

Yes

No

Sealants present on permanent molars

Yes

No

Fluorosis

None

Very mild

Mild

Moderate

Severe

The designation of untreated decay is given when the screener sees both a loss of at least ½ mm of tooth structure and dark discoloration. If a filling is also present in the tooth, caries is recorded. A broken or chipped tooth is not considered caries. If the screener was unsure about caries status, it was designated as not caries in the database but the Report of Dental Screening indicated that the child should go to the dentist at the earliest convenience.

The classification of treatment urgency was based on urgent care for a child with pain, abscess, or extensive large caries; early dental care for children just with caries; or none for regular checkups.

Caries experience was defined as a child who was currently experiencing caries or had evidence of experiencing caries in the past. Evidence of past caries included restorations,

temporary restorations, or crowns. Teeth that had been extracted for caries were also included; however, teeth extracted for another reason such as trauma or orthodontics were not included

Sealants were indicated only if the sealant was visible on a permanent molar. Explorers, toothpicks or forced air were not used to determine the presence of sealants. If the sealant was at least partially retained it was indicated as present.

Fluorosis was categorized according to Dean's index, ranging from very mild - small, opaque areas scattered irregularly over the tooth to severe - brown staining with pitting.

Post-screening

Nurses in some schools provided follow-up for children identified as needing urgent dental care to access treatment.

Data were analyzed using SAS. To insure local health department validity, statewide results were weighted accordingly.

Results

During the fall of 2005 an oral health status screening was conducted in 28 elementary schools throughout Utah. Of the 2,100 permission slips distributed, 1,317 (62.7%) were returned. There were 1,173 children screened, the remainder being children who were absent, children who refused to participate or the returned permission slip did not grant permission to screen. The results are reported for the 1086 children who fit the six to eight year old age requirement to correspond with HP2010 and previous surveys. The nine and ten year old children in third grade were screened but their results were not included in the data analysis. As data were weighted statewide, the results for the weighted data are reported.

There was an equal distribution of age groups and of males and females. Information was collected on race; however there was an insufficient number of children of races other than White to be statistically reliable. There were 16.0% of the children who indicated Hispanic ethnicity. The demographic data are included in the Appendix.

Questions on permission slip

Six questions were designed to determine access to dental care issues. When asked if the child had a toothache during the past six months, 12.2% indicated yes. There were 59.6% of the children who had visited a dental professional within the last six months and 20.8% who had a visit more than six months but less than one year, for a total of 80.4% of the children reporting that they had visited the dentist during the past year. In answer to the question of whether there was a time during the last twelve months when the child needed dental care but could not get it, 9.6% answered yes. For those children the primary reasons for not being able to get care were: not able to afford it (64.3%) or not having insurance (21.2%). There were 89.3% of the children who had medical insurance but only 73.2% of the children had any dental insurance. See Table 1 and Figures 1, 3, 5 and 6 for complete results.

The data were also analyzed by ethnicity. There were 61.3% of the Hispanic children who had visited a dental professional during the past year. There were 21.1% of these children who answered yes there was a time during the last twelve months when the child needed dental care but could not get it. Only 62.1% of the Hispanic children had any dental insurance. See Table 2 and Figures 2 and 4 for complete results.

Screening

More than half (55.3%) of the children had caries experience. There were 21.4% of the children screened who had obvious untreated decay and 2.8% of the children had urgent dental needs. For eight year old children, 45.1% had a sealant present on at least one permanent molar tooth. Most children (90.1%) did not show any evidence of fluorosis. See Table 3 and Figures 7, 8, 9 and 10 for complete results.

Caries experience and untreated decay were analyzed by age and gender. Caries experience increased with age and males had a slightly higher rate (57.2%) than females (53.5%). Untreated decay was similar across age and gender. Sealant data were

analyzed for eight year old children by gender with females having a higher sealant rate (49.4%) than males (41.2%). These results are indicated in Table 4.

Caries experience, untreated decay, treatment urgency, and sealants were analyzed by ethnicity. Hispanic children were more likely to have caries experience at 76.3%, 37.1% with untreated decay and 8.6% with urgent dental needs than the non-Hispanic children at 49.6% 15.6% and 1.2% respectively. These results are indicated in Table 5 and Figures 9, 11, 12, 13 and 14.

Caries experience, untreated decay and treatment urgency were also analyzed by whether the permission slip was completed in English or in Spanish. Children whose parents completed the permission slip in Spanish had higher rates of dental disease than those who completed the permission slip in English. For those whose forms were completed in Spanish, 87.1% had caries experience, 52.6% had untreated decay and 13.9% had urgent dental needs and versus 53.4%, 19.3%, and 2.1% respectively for those who completed the form in English. See Table 6 for complete results.

Adequate dental insurance is often a determining factor in whether or not a person receives needed dental care. Only 8.7% of children with private dental insurance stated that they had a toothache within the past six months in comparison to 22.8% of children with Medicaid, 12.4% children with no insurance and 23.0% of children with CHIP. Of children with private insurance 89.6% had seen the dentist within the past year; compared to 77.7% of children with CHIP, 71.2% of children with Medicaid, and 66.5% of children with no dental insurance. Dental insurance status was analyzed for caries experience, untreated decay, urgency, having a toothache, last dental visit and not being able to receive needed dental care. The results are indicated in Table 7 and Figures 15, 16 and 17.

Regular dental visits are necessary for optimal oral health. The rate of untreated decay was lower for those who visited the dentist within the last six months. Only 16.0% of the children who had been to the dentist within the past six months had untreated decay in comparison to 51.2% of the children who had never been to the dentist. For those who had visited the dentist between six months and one year, 20.8% had untreated decay and 34.3% had untreated decay if it had been more than one year since the last dental visit.

Children were screened and data were sorted and analyzed geographically by local health districts. The rate of caries experience ranged from 42.3% in Wasatch County to 80.0% in TriCounty. Utah County had the lowest rate of untreated decay at 16.5% and TriCounty had the highest rate at 50.0%. Sealants were most frequent in Summit County at 70.6% and least frequent in Wasatch County at 18.2%. The results by local health districts are indicated in Tables 8, 9, and 10.

Table 1

Access to Care Questionnaire Results
Comparison of 2000 to 2005 Statewide

	2005	CI*	2000**	CI*
Toothache in the past 6 months				
Yes	12.2%	10.1%-14.3%	9.9%	8.3%-11.4%
No	85.7%	83.5%-87.9%	87.2%	85.4%-88.9%
Don't know	2.1%	1.2% - 3.0%	3.0%	2.0% - 4.0%
Last visited a dentist				
6 months or less	59.6%	56.5%-62.7%	60.3%	57.8%-62.9%
More than 6 months/less than 1 year		18.3%-23.3%		18.5%-22.8%
More than 1 year/not more than 3 years		11.1%-15.5%		11.6%-15.1%
More than 3 years	2.2%	1.2% - 3.2%	2.2%	1.4% - 3.0%
Never been to the dentist	2.7%		3.4%	2.5% - 4.4%
Don't know	1.5%			0.0% - 0.3%
Needed dental care but could not get it				
Yes	9 6%	7.7%-11.5%	10.5%	9.0%-12.1%
No		86.2%-90.4%		86.8%-90.4%
Don't know		1.2% - 3.0%		0.3% - 1.5%
Main reason for those who needed	Looro b	ut apuld not gott	- 14	
Could not afford it		44.5%-60.9%		49.5%-66.0%
No insurance		15.7%-29.5%		17.7%-32.3%
Other		12.3%-25.1%		11.0%-23.5%
Don't know		2.1% - 9.9%	0.0%	
Incurrence that nave for medical or enursia	al aawa			
Insurance that pays for medical or surgic Yes		87.3%-91.3%	QQ Q0/	87.1%-90.6%
No	9.8%			9.1%-12.2%
Don't know	9.8% 0.9%		0.5%	
Don't know	0.976	0.3% - 1.3%	0.576	0.170 - 0.970
Type of insurance that pays for m				
Medicaid	9.0%			
CHIP	4.2%	2.9% - 5.5%		
Private		61.9%-68.1%		
Other		9.1%-13.1%		
None		7.9%-11.7%		
Don't know	0.9%	0.3% - 1.5%		

Table 1 Access to Care Questionnaire Results (continued)

Insurance that pays for dental care

Yes	73.9%	71.1%-76.7%	77.2%	76.9%-77.4%
No	24.7%	21.9%-27.5%	22.1%	20.0%-24.3%
Don't know	1.5%	0.7% - 2.3%	0.7%	0.3% - 1.1%

Type of insurance that pays for dental care

8.3%	6.5%-10.1%
4.1%	2.8% - 5.4%
51.7%	48.5%-54.9%
9.8%	7.8%-11.8%
24.7%	21.9%-27.5%
1.5%	0.7% - 2.3%
	4.1% 51.7% 9.8% 24.7%

^{*95%} Confidence Interval

^{**}Results are based on valid responses and exclude No Answer

Table 2

2005 Access to Care Questionnaire Results
By Ethnicity

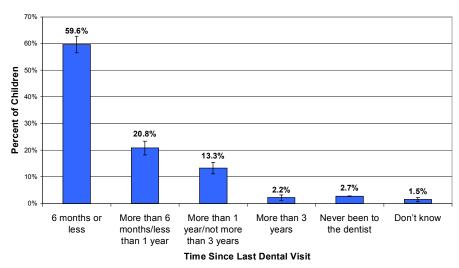
Toothache in the past 6 months	Hisp	anic CI*	Non-H	Hispanic CI*
Yes	16.8%	11.0%-22.6%	11.7%	8.9%-14.5%
No		71.4%-84.2%		84.3%-90.1%
Don't know		• 00/ 000/		0.2% - 2.0%
Don't know	3.370	2.070 9.070	1.1 / 0	0.270 2.070
Last visited a dentist				
6 months or less	39.4%	35.2%-43.6%	64.8%	60.7%-68.9%
More than 6 months/less than 1 year	21.9%	18.3%-25.5%	20.5%	17.1%-24.1%
More than 1 year/not more than 3 years	21.7%	18.1%-25.3%	10.9%	8.2%-13.6%
More than 3 years	7.0%	4.8% - 9.2%	1.3%	0.3% - 2.3%
Never been to the dentist	5.1%	3.2% - 7.0%	1.9%	0.8% - 3.2%
Don't know	5.0%	1.6% - 8.4%	0.6%	0.0% - 1.3%
Needed dental care but could not get it				
Yes	21.1%	17.6%-24.6%	5.7%	3.7% - 7.7%
No		68.7%-76.5%		90.9%-95.3%
Don't know	6.3%		1.3%	0.3% - 2.3%
Main wassan fau thasa who needed	l aawa b	ut aauld wat ga	.4:4	
Main reason for those who needed Could not afford it		at could not ge 35.9%-61.5%		46 20/ 75 90/
		12.1%-33.5%		
No insurance				
Other		12.0%-33.4%		3.9%-25.1%
Don't know	5.9%	0.0%-11.9%	5.2%	0.0%-11.9%
Insurance that pays for medical or surgic	al care			
Medicaid		17.5%-24.5%	5.5%	2.0%- 9.0%
CHIP	9.5%	7.0%-12.0%	3.5%	
Private	32.8%	28.7%-39.9%	76.4%	5.3%-14.5%
Other	4.4%	1.2% - 7.6%	10.9%	5.9%-15.7%
None	29.5%	25.5%-33.5%	3.9%	0.9% - 6.9%
Don't know	2.9%	1.4% - 4.4%	0.0%	0.0% - 0.0%
Insurance that pays for dental care				
Medicaid	19.3%	15.9%-22.7%	5.2%	1.7% - 8.7%
CHIP	9.6%	7.1%-12.1%	3.2%	0.5% - 5.9%
Private		24.4%-32.2%	59.8%	52.2%-67.4%
Other	4.9%	1.5% - 8.3%	9.6%	7.1%-12.2%
None		29.2%-37.4%	21.7%	15.3%-28.1%
Don't know	4.5%		0.5%	0.0% - 1.6%
		,0 0.5,0	J.C / U	0.070 1.070

^{*95%} Confidence Interval

Key Finding #1: Four Out of Five Utah Children Had Routine Dental Visits.

Figure 1

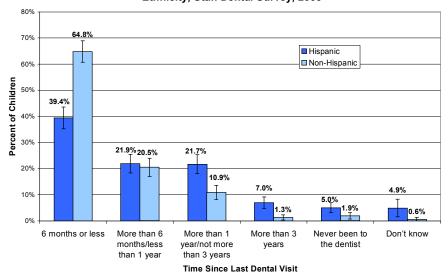
Percent of Children 6-8 Years Old by Time Since Last Dental Visit,
Utah Dental Survey, 2005



- Over 80% of the parents reported that their children had visited the dentist within the last year.
- Almost 35% of the Hispanic children had not visited a dentist during the past year.

Figure 2

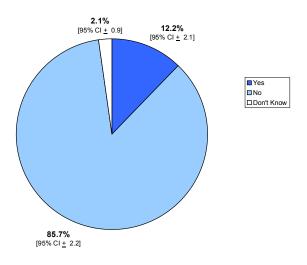
Percent of Children 6-8 Years Old by Time Since Last Dental Visit by Ethnicity, Utah Dental Survey, 2005



Key Finding #2: Almost One in Eight Children Reported Having a Toothache in the Last Six Months

Figure 3

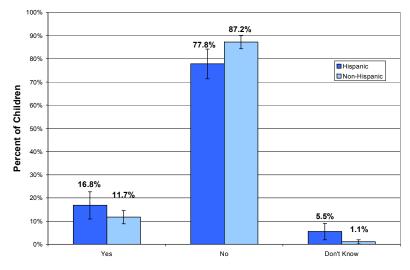
Percent of Children 6-8 Years Old That Reported Having a Toothache in the Last Six Months, Utah Dental Survey, 2005



- 12.2 percent of children translates into 15,900 6-8 year old children statewide.
- Hispanic children reported having a toothache more often than non-Hispanic children.

Figure 4

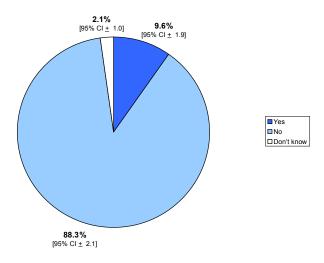
Percent of Children 6-8 Years Old That Reported Having a Toothache in the Last Six Months by Ethnicity, Utah Dental Survey, 2005



Key Finding #3: Almost One in Ten Children Needed Dental Care but Could Not Get It.

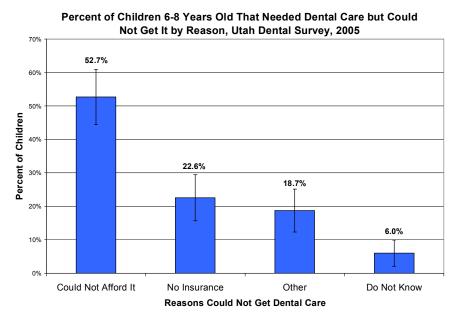
Figure 5

Percent of Children 6-8 Years Old That Needed Dental Care but Could
Not Get It, Utah Dental Survey, 2005



• Primary reasons for not being able to get care were: not able to afford it, 52.7%, and not having insurance, 22.6%.

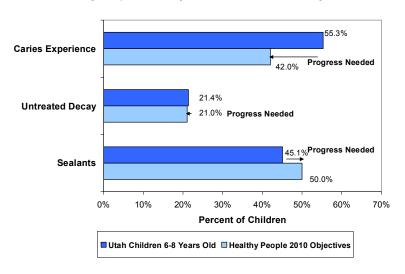
Figure 6



Key Finding #4: Progress Is Needed to Reach HP2010 Objectives.

Figure 7

Oral Health of Utah Children 6-8 Years Old Compared to Healthy People 2010 Objectives, Utah Dental Survey, 2005



- Extensive progress is needed to reach the HP 2010 Objectives for caries experience and sealants.
- Considerably less progress is needed to reach the untreated decay objective.

Table 3

Screening Survey Results

Comparison of 2000 to 2005 Statewide

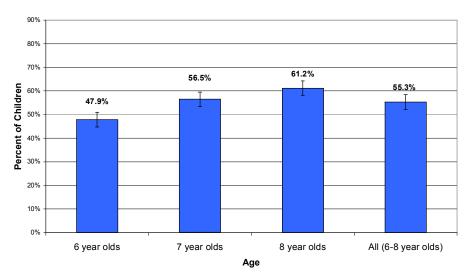
	Freque	2005 ncy Percent	CI*		000 cy Percent	CI*
Caries Exper	ience 431	44.7%	41.6%-47.8%	606	41.6%	20.20/ 44.00/
Yes	532	55.3%	52.3%-58.4%	850	58.4%	39.2%-44.0% 55.5%-61.3%
Untreated De	·					
None Yes	757 206	78.6% 21.4%	76.0%-81.2% 18.9%-23.9%	1134 321	77.9% 22.1%	75.8%-80.0% 19.9%-24.3%
T 4 4 II.						
Treatment Un No obvious	rgency					
problem	757	78.6%	76.0%-81.2%	1198	82.3%	80.3%-84.3%
Early care	179	18.6%	16.2%-21.1%	225	15.5%	13.6%-17.4%
Urgent care	27	2.8%	1.8%-3.8%	33	2.2%	1.4%- 3.0%
Sealants 8 Ye	ar Olds					
None	189	54.9%	49.8%-60.0%	253	50.1%	45.7%-54.5%
Yes	155	45.1%	39.8%-50.4%	252	49.9%	45.6%-54.2%
Sealants Thir						
None	206	56.7%	51.6%-61.8%			
Yes	157	43.3%	38.2%-48.4%			
Fluorosis						
None	868	90.1%	88.1%-92.1%			
Mild	88	9.1%	7.2%-10.9%			
Moderate	8	0.8%	0.2%- 1.4%			

^{*95%} Confidence Interval

Key Finding #5: Over Half of Utah's Six to Eight Year Old Children Had Experienced Caries.

Figure 8

Percent of Children With Dental Caries Experience in Permanent or Primary Teeth by Age, Utah Dental Survey, 2005

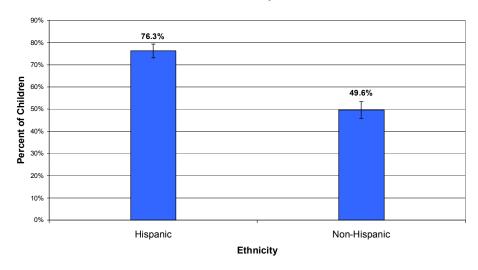


- Caries experience increased with age and males had a slightly higher rate (57.2%) than females (53.5%).
- Hispanic children had experienced dental caries more often than non-Hispanic children.

Figure 9

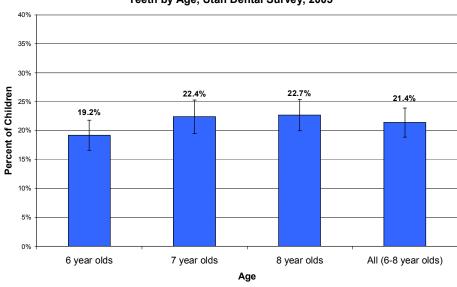
Percent of Children 6-8 Years Old With Dental Caries Experience in Permanent or Primary Teeth by Ethnicity,

Utah Dental Survey, 2005



Key Finding #6: One in Five Six to Eight Year Old Children Had Untreated Decay.

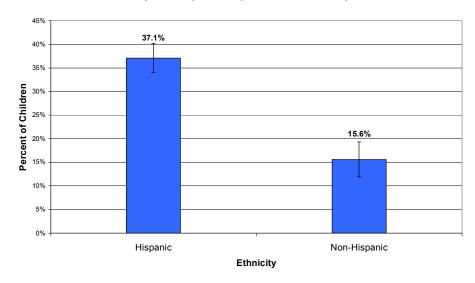
 $Figure \ 10$ Percent of Children With Untreated Decay in Permanent or Primary Teeth by Age, Utah Dental Survey, 2005



- Over 20% of 6-8 year old Utah children had untreated decay.
- Hispanic children were more than twice as likely to have untreated decay compared to non-Hispanic children.

Figure 11

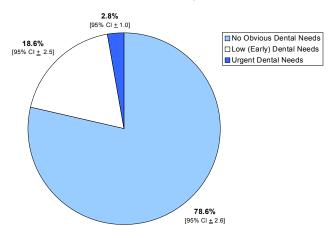
Percent of Children 6-8 Years Old With Untreated Decay in Permanent or Primary Teeth by Ethnicity, Utah Dental Survey, 2005



Key Finding #7: Almost 3% of Utah's Six to Eight Year Old Children Had Urgent Dental Care Needs.

Figure 12

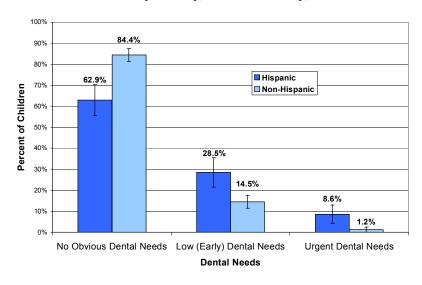
Percent of Children 6-8 Years Old Needing Dental Care,
Utah Dental Survey, 2005



- There were 21.4% of the children screened who had obvious untreated decay and 2.8% of the children needed urgent dental care.
- For almost 3% of the children, there was an emergency or urgent dental need, equating to more than 3600 six to eight year old children in Utah.
- Hispanic children were more likely to have untreated decay (37.1% vs 15.7%) and 8.6% had urgent dental needs compared to 1.2% of non-Hispanic children.

 Figure 13

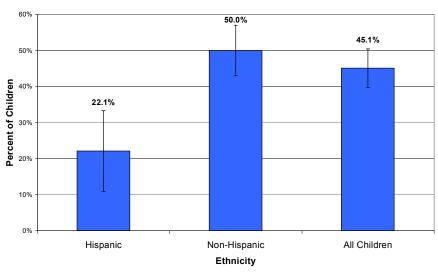
Percent of Children 6-8 Years Old Needing Dental Care by Ethnicity, Utah Dental Survey, 2005



Key Finding #8: Less Than Half (45.1%) of Utah's Eight Year Old Children Had Sealants.

Figure 14

Percent of 8 Year Old Children With Sealants by Ethnicity,
Utah Dental Survey, 2005



- Half of non-Hispanic children had a least one sealant on a permanent tooth.
- Medicaid recipients had the lowest proportion of sealant utilization while CHIP recipients had the highest.

Figure 15

Percent of 8 Year Old Children With Sealants by Type of Dental Insurance, Utah Dental Survey, 2005

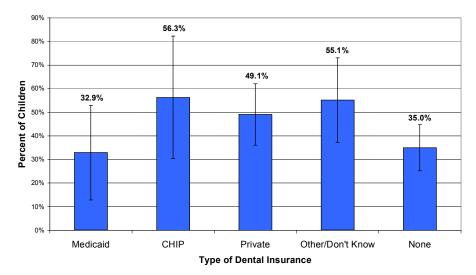


Table 4 2005 Screening Survey Results by Age and Gender

Caries Experience by Age and Gender

None Yes	6 Years Old CI* 52.1% 46.7%-57.5% 47.9% 44.8%-51.0%	7 Years Old CI* 43.5% 37.8%-49.2% 56.5% 53.4%-59.6%	8 Years Olds CI* 38.8% 33.7%-44.0% 61.2% 58.1%-64.3%
None Yes	Male CI* 42.8% 38.3%-47.3% 57.2% 52.7%-61.7%	Female CI* 46.5% 42.2%-50.9% 53.5% 49.2%-57.9%	

Untreated Decay by Age and Gender

	6 Years Old CI*	7 Years Old CI*	8 Years Olds CI*
None Yes	80.8% 76.5%-85.1% 19.2% 16.7%-21.8%	77.6% 72.8%-82.4% 22.4% 19.6%-25.3%	77.3% 72.9%-81.7% 22.7% 18.9%-23.9%
None Yes	Male CI* 78.4% 74.6%-82.2% 21.6% 17.8%-25.7%	Female CI* 78.7% 75.1%-82.3% 21.3% 17.7%-24.9%	•

Sealants 8 Year Olds by Gender

	Male CI*	Female CI*
None	58.8% 51.6%-66.0%	50.6% 43.0%-58.2%
Yes	41.2% 34.0%-48.4%	49.4% 41.8%-57.0%

^{*95%} Confidence Interval

Table 5
2005 Screening Survey Results by Ethnicity

	Hispanic CI*	Non-Hispanic CI*
Caries Experience	32 70 / 17 3 0/ 30 3 0/	50 40 / 46 10/ 54 70/
None	23.7% 17.2%-30.2%	50.4% 46.1%-54.7%
Yes	76.3% 73.2%-79.4%	49.6% 45.9%-53.3%
Untreated Decay		
None	62.9% 55.5%-70.3%	84.4% 81.3%-87.5%
Yes	37.1% 33.6%-41.5%	15.6% 12.9%-18.3%
Treatment Urgency	62.00 / 53.5 0/ 5 0.60/	
No obvious problem	62.9% 55.5%-70.6%	84.4% 81.3%-87.5%
Early care	28.5% 21.5%-35.7%	14.5% 11.5%-17.5%
Urgent care	8.6% 4.3%-12.9%	1.2% 0.3% - 2.1%
Sealants	77.00/ ((70/ 90.10/	50.00 / 42.00/ 57.00/
None	77.9% 66.7%-89.1%	50.0% 43.0%-57.0%
Yes	22.1% 10.9%-33.3%	50.0% 43.0%-57.0%

^{*95%} Confidence Interval

Table 6
2005 Screening Survey Results by Language

	Spanish CI*	English CI*
Caries Experience None Yes	12.9% 4.5%-21.3% 87.1% 78.7%-95.5%	46.6% 43.4%-49.9% 53.4% 50.2%-56.7%
Untreated Decay None Yes	47.4% 34.9%-59.9% 52.6% 40.1%-65.1%	80.7% 78.1%-83.3% 19.3% 16.7%-21.9%
Treatment Urgency No obvious problem Early care Urgent care	47.4% 34.9%-59.9% 38.8% 26.6%-51.0% 13.9% 5.2%-22.6%	80.7% 78.0%-83.3% 17.2% 14.7%-19.7% 2.1% 1.2%-3.0%

^{*95%} Confidence Interval

Table 7
2005 Survey Results by Dental Insurance Status

Percent of Children with Dental Status by Insurance Type CI*

Insurance Medicaid	Caries Experience 70.9%	Untreated Decay 28.9%	Urgency 5.6%	Toothache 22.8%
	60.8%-81.0%	18.9%-39.0%	0.5%-10.7%	13.5%-32.1%
CHIP	89.1%	37.3%	7.4%	23.0%
	79.2%-99.0%	22.1%-52.5%	0.0%-15.6%	9.8%-36.2%
Private	46.7%	17.0%	1.9%	8.7%
	33.1%-60.3%	13.7%-20.4%	0.7%-3.1%	0.0%-20.8%
None	60.1%	24.0%	2.8%	12.4%
	53.8%-66.4%	18.5%-29.5%	0.6%-5.0%	8.1%-16.7%

Percent of Children Since Last Dental Visit by Insurance Type CI*

Insurance	<6 months	6 months-1 ye	ear 1-3 years	>3 years	Never
Medicaid	44.0%	27.2%	19.2%	1.7%	3.4%
	30.0%-55.0%	13.5%-31.9%	10.5%-27.9%	0.0%-4.5%	0.0%-7.4%
CHIP	52.3%	25.4%	16.6%	0.0%	4.5%
	36.4%-68.2%	11.5%-39.3%	4.8%-28.4%	0.0%- $0.0%$	0.0%-11.1%
Private	72.1%	17.5%	8.4%	0.5%	0.9%
	68.1%-76.1%	14.1%-20.9%	5.9%-10.9%	0.0%-1.1%	0.1%-1.7%
None	42.1%	24.4%	21.1%	5.3%	5.1%
	35.7%-48.5%	18.9%-30.0%	15.8%-26.4%	2.4%-8.2%	2.3%-7.9%

Percent of Children Who Needed Care but Could Not Access It By Insurance Type CI*

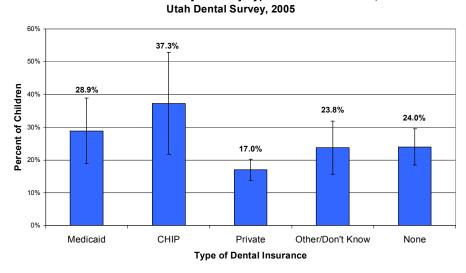
Insurance		
Medicaid	11.4%	4.6%-18.6%
CHIP	5.0%	0.0%-12.5%
Private	3.9%	0.0%-21.2%
None	21.4%	16.1%-26.8%

^{*95%} Confidence Interval

Key Finding #9: Dental Insurance Coverage Affects Oral Health Status.

Figure 16

Percent of Children 6-8 Years Old With Untreated Dental Decay in Permanent or Primary Teeth by Type of Dental Insurance,



- The children who were covered by CHIP dental insurance had the largest proportion of untreated decay (37.7%).
- Almost a quarter of the parents indicated that they had no dental insurance for their children.
- Hispanic children reported a higher rate of no dental insurance compared to non-Hispanic children (34.9% vs 21.8%).

Figure 17

Percent of Children 6-8 Years Old by Type of Dental Insurance and Ethnicity, Utah Dental Survey, 2005

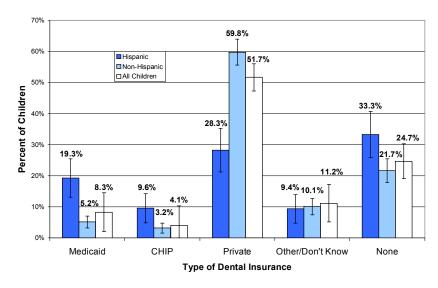


Table 8

Caries Experience in Utah Children 6-8 Years Old Local Health District

Healthy People 2010 Objective 21-1b: Reduce the proportion of children with dental caries experience in primary and permanent teeth. Target: 42%.

US Baseline: 52% of children aged 6 to 8 years had dental caries experience in 1988-94. Utah Previous Survey: 58% of children aged 6 to 8 years had dental caries experience in 2000.

Local Health District	Percent	CI*
Bear River	65.3%	53.5%-77.1%
Central	77.8%**	63.5%-92.1%
Davis	***	
Salt Lake Valley	47.3%	42.4%-52.2%
Southeastern	73.3%**	54.7%-91.9%
Southwest	48.7%	36.3%-60.9%
Summit	57.7%**	20.3%-87.1%
Tooele	69.5%	50.1%-88.9%
TriCounty	80.0%**	63.1%-96.9%
Utah	52.7%	46.0%-59.4%
Wasatch	42.3%**	12.9%-71.7%
Weber-Morgan	72.7%	63.9%-81.5%
State	55.3%	52.2%-58.4%

^{*95%} Confidence Interval

^{**}These rates should be interpreted with caution due to small numbers of responses within this category for this local health district.

^{***}Davis County did not participate in the 2005 survey.

Table 9
Untreated Decay in Utah Children 6-8 Years Old
Local Health District

Healthy People 2010 Objective 21-2b: Reduce the proportion of children with untreated dental decay in primary and permanent teeth.

Target: 21%.

US Baseline: 29% of children aged 6 to 8 years had untreated dental decay in 1988-94. Utah Previous Survey: 22% of children aged 6 to 8 years had untreated dental decay in 2000.

Local Health District	Percent	CI*
Bear River	29.5%	18.3%-40.7%
Central	37.0%	20.3%-53.8%
Davis	***	
Salt Lake Valley	17.9%	14.2%-21.6%
Southeastern	27.6%**	8.8%-46.4%
Southwest	21.1%	11.1%-31.1%
Summit	26.9%**	0.4%-53.4%
Tooele	37.9%	17.5%-58.3%
TriCounty	50.0%	28.4%-71.6%
Utah	16.5%	11.6%-21.4%
Wasatch	23.1%**	0.0%-48.6%
Weber-Morgan	24.4%	16.0%-32.8%
State	21.4%	18.9%-24.0%

^{*95%} Confidence Interval

^{**}These rates should be interpreted with caution due to small numbers of responses within this category for this local health district.

^{***}Davis County did not participate in the 2005 survey.

Table 10

Sealants in Utah Children 8 Years Old Local Health District

Healthy People 2010 Objective 21-8a: Increase the proportion of children aged 8 years old who have received dental sealants in their molar teeth.

Target: 50%.

US Baseline: 23% of children aged 8 years had sealants in 1988-94.

Utah Previous Survey: 50% of children aged 8 years had sealants in 2000.

Local Health District	Percent	CI*
Bear River	62.5%	41.9%-83.1%
Central	60.0%**	32.6%-87.4%
Davis	***	
Salt Lake Valley	42.2%	34.0%-50.4%
Southeastern	37.5%**	4.6%-70.4%
Southwest	28.6%	10.6%-46.6%
Summit	70.6%**	29.4%-100.0%
Tooele	32.4%**	1.0%-63.8%
TriCounty	27.3%**	0.0%-62.6%
Utah	52.2%	41.2%-63.2%
Wasatch	18.2%**	0.0%-53.5%
Weber-Morgan	44.3%	27.8%-60.8%
State	45.1%	39.8%-50.4%

^{*95%} Confidence Interval

^{**}These rates should be interpreted with caution due to small numbers of responses within this category for this local health district.

^{***}Davis County did not participate in the 2005 survey.

Discussion

Access

The questionnaire responses indicated that for the majority of the children access to dental care is available and has not changed since 2000. However, a significant percentage of children do not have access to reasonably available dental care. Of the children screened, 18.2% were not receiving regular (at least yearly) dental visits. For the almost 10% that needed care but could not get it the main reason was financial. They could not afford to get the care (52.7%) or they did not have dental insurance to cover the costs (22.6%).

Poverty and a lack of dental insurance have repeatedly been shown to affect dental health status. For the 65.0% of the children with private dental insurance access to regular dental care was related to improved oral health status. The rates of caries experience, untreated decay, treatment urgency and history of toothache were significantly lower for these children than for the children with Medicaid, CHIP or no dental insurance. Data from the Utah Division of Health Care Financing shows high utilization of dental services for CHIP enrollees. The percent of children with CHIP who indicated not being able to access needed dental care (4.8%) was lower than for all other children, indicating available access. However, the rate of untreated decay and urgent dental need was higher for children with CHIP coverage. This may be due to the transition from Medicaid to CHIP during this age group, families delaying enrolling children in CHIP until medical need is high, the co-pays as a barrier to care, or the difficulty for working parents to take time off work for preventive dental appointments. An additional factor to consider is that CHIP eliminated most of its dental benefit from January 2002 through June 2003 because of funding cuts. Full dental services were restored July 2003. Further study is needed to examine this difference.

Caries

The results of the survey reiterate the concept that, while the rate of dental caries is decreasing as a whole, there are still children's population groups that are not improving. Past state and national surveys have documented that 25% of the children have 80% of the disease. Regular dental care and other preventive measures are not available to all Utahns. Over one-fifth of the children had obvious untreated decay.

Water fluoridation is the most effective preventive measure to prevent dental caries. It does not discriminate by age, insurance status, socioeconomic status, race or ethnicity. Salt Lake County and Davis County residents voted to implement fluoridation in the 2000 election. As children begin growing up with water systems that are fluoridated, studies from other communities that have fluoridated indicate that the caries rate for Salt Lake and Davis residents will improve. As other areas of the state decide to do this in the future, their residents would also benefit from water fluoridation.

Treatment urgency

The degree of treatment urgency was defined as none, early dental care and urgent need. Almost 3% of the children had an emergency or urgent dental need. Based on this percentage, we estimate there are over 3600 six to eight years old children in Utah with emergency or urgent dental need.

Sealants

The Oral Health Program conducted an extensive Sealant Promotion Project from 1982 to 1987. This project consisted of three objectives.

- 1. Increase sealant placement in the dental office
- 2. Increase insurance reimbursement
- 3. Increase public awareness including parents, teachers, and physicians

During this promotion, the sealant rate on eight year old children increased from 5% to 28%. In 1996 the sealant rate was 45% and in 2000 it was 50%. It has now decreased to 45.1%; however, the difference was not statistically significant.

Over the past several years, sealant placement projects have been conducted in partnership with local entities.

- The Sealant for Smiles project in Salt Lake County involves United Way, Salt Lake Valley Health Department, selected high risk schools, local dental hygienists, hygiene students, assistants, and the Oral Health Program. Sealants are placed on the children's teeth that have been identified as needing sealants at a screening. The sealant placement rate in Salt Lake County increased from 41% in 1996 to 45.8% in 2000 and decreased to 42.2% in 2005.
- Weber State Dental Hygiene Program has been placing sealants on high risk children since 1996. Children in Ogden School District are identified through a screening as needing sealants and are transported to Weber State where dental hygiene students place the sealants. In 1996 the sealant rate was 50% in Weber-Morgan Health District, in 2000 it increased to 57.1%, and in 2005 it decreased to 44.3%.
- The Dr. Sealant project in TriCounty promoted sealants which were paid for by the local health department. Children received the sealants in the private dentists' offices. This project is no longer functioning and the rate of sealant placement has fallen from 59% in 1996 to 30.8% in 2000 and 27.3% in 2005 in TriCounty Health District.

Race/Ethnicity

The categories for race were White, Black/African American, Asian, Native Hawaiian/Pacific Islander, American Indian/Alaska Native or other. Insufficient race numbers, other than White, were available and therefore not analyzed. Ethnicity was defined as Non-Hispanic or Hispanic. The percentage of Hispanic children screened is higher than the Utah Office of Education percentage of Hispanic students for the same age group.

The screening data raise concerns about unmet oral health needs for Hispanic children due to striking disparities between ethnic groups. Hispanic children had more than twice

the untreated decay rates (37.1%) compared to non-Hispanic children (15.6%). Also, more Hispanic children than non-Hispanic children had suffered from a toothache within the previous six months (16.8% vs 11.7%). The percent of Hispanic children with urgent dental needs (8.6%) was extremely higher than the rate for non-Hispanics (1.2%). Fewer Hispanic children had received sealants than non-Hispanic children (22.1% vs 50.0%). A higher percentage of Hispanics reported unmet needs compared to the overall rate (21.1% v 9.6%). A lower proportion of Hispanics reported having private dental insurance compared to non-Hispanics (28.3% v 59.8%).

Language

Children whose parents answered the permission slip in Spanish rather than English had considerably higher dental disease rates which may be due to the family being more recent immigrants to Utah. These children have the potential for the greatest improvement as they learn about oral hygiene measures and prevention such as fluoridation, fluoride varnish, regular dental visits, and sealants. Educational materials in Spanish will benefit these children and their parents.

Local Health Districts

In contrast to previous surveys some local health districts which had consistently shown the healthiest oral health measures did not rank as high in this survey. However, local health districts which had consistently ranked lower continue to demonstrate high disease rates. Several factors may be involved, such as socioeconomic level, availability of insurance, education level, or accessibility to dental care. The Oral Health Program can focus on areas needing more attention.

By comparing urban to rural health districts, there is not a clear advantage to one or the other in caries experience. However, in a change from previous surveys, urban health districts had lower rates of untreated decay, indicating improved access to care.

Summary

Highlights of the survey include:

- There has been a moderate improvement in the percent of children with dental caries since the 2000 survey. However, still more than half of all children have experienced dental caries.
- The rate of untreated decay has remained the same since the 2000 survey with one in five children having obvious untreated decay.
- Eight year old children are less likely to have at least one sealant in a permanent molar at 45% compared to the findings of the 2000 survey at 50%.
- Fluorosis is rare, with no cases of severe fluorosis and less than 1% of children having moderate fluorosis.
- More than three-fourths of the parents reported that their child had visited a dentist within the past year.
- Almost one in ten parents reported that their child had needed dental care during the past 12 months but could not get it. The reasons most frequently cited for not getting care were "couldn't afford it" and "no insurance."
- Hispanic children were more likely to have unmet needs compared to the overall population surveyed, including higher caries experience, untreated decay, urgent dental needs, and history of toothache rates.
- Hispanics were less likely to have sealants, regular dental visits and dental insurance.
- The majority of parents reported having insurance that pays for their child's medical care (89.3%). However, one in four parents do not have insurance that pays for dental care.

The results of the survey will be used as a guide for the Oral Health Program in determining future activities to improve the oral health status of Utah children.

Appendix

BR	Sch#	Name	School District	Health Dis
	03 120	CORINNE ELEM SCH	BOX ELDER SCHOOL DISTRICT	Bear Rive
	04 128	LINCOLN ELEM SCH	CACHE SCHOOL DISTRICT	Bear Rive
Central				
	23 104	CIRCLEVILLE ELEM SCH	PIUTE SCHOOL DISTRICT	Central
	29 108	EUREKA ELEM SCH	TINTIC SCHOOL DISTRICT	Central
Davis				
	07 120	CLINTON ELEM SCH	DAVIS SCHOOL DISTRICT	Davis
	07 149	WINDRIDGE ELEM SCH	DAVIS SCHOOL DISTRICT	Davis
	07 158	SOUTH WEBER ELEM SCH	DAVIS SCHOOL DISTRICT	Davis
	07 152	WOODS CROSS ELEM SCH	DAVIS SCHOOL DISTRICT	Davis
SL	26.112			Q 1. T 1
	36 112	BONNEVILLE ELEM SCH	SALT LAKE CITY SCHOOL DISTRICT	
	40 130	VIEWMONT ELEM SCH	MURRAY SCHOOL DISTRICT	Salt Lake
	36 140	NORTH STAR ELEM SCH	SALT LAKE CITY SCHOOL DISTRICT	Salt Lake
	14 150	PERUVIAN PARK ELEM SCH	JORDAN SCHOOL DISTRICT	Salt Lake
	36 180	HIGHLAND PARK ELEM SCH	SALT LAKE CITY SCHOOL DISTRICT	Salt Lake
	12 190	ROSECREST ELEM SCH	GRANITE SCHOOL DISTRICT	Salt Lake
	12 199	TWIN PEAKS ELEM SCH	GRANITE SCHOOL DISTRICT	Salt Lake
	12 202	WESTERN HILLS ELEM SCH	GRANITE SCHOOL DISTRICT	Salt Lake
SE				
	09 120	FERRON ELEM SCH	EMERY SCHOOL DISTRICT	Southeast
	09 128	HUNTINGTON ELEM SCH	EMERY SCHOOL DISTRICT	Southeast
SW				
	33 102	BLOOMINGTON ELEM SCH	WASHINGTON SCHOOL DISTRICT	Southwest
	33-104	ENTERPRISE ELEM SCH	WASHINGTON SCHOOL DISTRICT	Southwest
Summit	28 104	SOUTH SUMMIT ELEM SCH	S SUMMIT SCHOOL DISTRICT]
Summi	22 112	JEREMY RANCH ELEM SCH	PARK CITY SCHOOL DISTRICT	Summit
	22 112	PERENT RAIVETT ELENT GETT	TARK CITT SCHOOL DISTRICT	Summe
Tooele	30 106	EAST ELEM SCH	TOOELE SCHOOL DISTRICT	Tooele
1 00010	30 100	ANNA SMITH ELEM SCH	TOOELE SCHOOL DISTRICT	Tooele
	20 170	A TATAL SIMILITI DEDIVI SCII	100EEE SCHOOL DISTRICT	100010
	County			
Tri-	31 116	LA POINT ELEM SCH	UINTAH SCHOOL DISTRICT	TriCounty
	31 128	W RUSSELL TODD ELEM SCH	UINTAH SCHOOL DISTRICT	TriCounty
		•		

01 105	ASPEN ELEM SCH	ALPINE SCHOOL DISTRICT	Utah
01 107	BONNEVILLE ELEM SCH	ALPINE SCHOOL DISTRICT	Utah
01 124	FORBES ELEM SCH	ALPINE SCHOOL DISTRICT	Utah
01 136	GROVECREST ELEM SCH	ALPINE SCHOOL DISTRICT	Utah

Wasatch 32 108	MIDWAY ELEM SCH	WASATCH SCHOOL DISTRICT	Wasatch
		I	T
Weber/Morgan	37 160	MOUNTAIN VIEW ELEM SCH	OGDEN
			SCHOOL
			DISTRIC
37 180	THOMAS O SMITH ELEM SCH	OGDEN SCHOOL DISTRICT	Weber Mo
35 121	MAJESTIC ELEM SCH	WEBER SCHOOL DISTRICT	Weber Mo
35 140	PLAIN CITY ELEM SCH	WEBER SCHOOL DISTRICT	Weber Mo

Superintendent District Address City, Utah 84000

Dear S	uperintendent	_
Dear 5	apermienaem	2

In recognition of the need for current community level oral health status and dental care access data, the Utah Department of Health (UDOH) Oral Health Program will be conducting a statewide oral health survey in the fall of 2005. The purpose is to measure and document statewide oral health indicators, utilizing the guidelines set up in the Healthy People 2010 oral health objectives. The results of this survey will affect future oral health programs of the Utah Department of Health.

We are asking twenty school districts, including yours, to assist in this activity by allowing us to survey children in the first, second, and third grades. One classroom from each of first, second and third grades in randomly selected elementary schools will be selected for the survey. On the scheduled day, the children with permission slips will be surveyed in small groups, in a separate room designated by the school. The process should take no more than forty minutes for each classroom, so we anticipate minimal disruption to the school routine.

The selected schools will be provided with information letters to be sent home to parents. The letter will include pertinent information about the survey, a permission slip, and a few survey questions including the ability to access needed dental care. A report of any dental needs found during the survey process will be sent home with the child. Our sample includes the following schools from your district: *school one, school two, school three*. Principals of these schools will receive information early in August regarding the selected classrooms and date of the survey.

In order to proceed with these plans, we would appreciate your written or verbal permission by Monday, May 16, 2005. With your approval, we will work directly with the principals to accomplish this important activity.

Please contact Peggy Bowman, (801) 538-6026 with questions or comments regarding the survey. Permission to survey may be addressed to Dr. Steven Steed at the address above, by phone, (801) 538-9177, fax 538-9440,or by e-mail, stevensteed@utah.gov. Thank you very much.

Sincerely,

Steven J. Steed, D.D.S. Utah State Dental Director August 1, 2005

#Principal# #School# #Address# #City UT 84#

Dear Principal ###:

This is a reminder that we will be visiting your school on:

######## ##, 2005 #### a.m. or ### p.m.

Enclosed are 75 permission forms with information for the parents. The forms are in English and in Spanish. We have allowed 25 per class selected in the first, second and third grades identified for this study. The permission form should go home with registration materials for each child from the selected class. The permission slip needs to be returned with the parent's signature as soon as possible.

To facilitate the examinations, we ask that prior to the examination date you identify a room, other than the regular classroom, which has several chairs, one large or two small table(s), and two electrical outlets that can be used for the dental exams. Space is needed to set up the portable dental chair and light. The screening process will take approximately 40 minutes per classroom. A report of any dental needs found is sent home with each child.

A member of the examining team will be in contact with you the week prior to the scheduled examination to answer any questions. If you have questions prior to then, please feel free to contact Peggy A Bowman, RDH, at 801 538-6026.

Thank you for you cooperation.

Sincerely,

Steven Steed, DDS Utah State Dental Director

cc: #LHD director#
LHD dental contact#

##, RN #
#School District or #Local Health Dept
#Address#
#City UT 84###

August 1, 2005

Dear ##,

In recognition of the need for current community level oral health status and dental care access data, the Utah Department of Health (UDOH) Oral Health Program will be conducting a statewide oral health survey in the fall of 2005. The purpose is to measure and document statewide oral health indicators, utilizing the guidelines set up in the Healthy People 2010 oral health objectives. The results of this survey will affect future oral health programs of the Utah Department of Health.

The superintendent of the school district and the principal of randomly selected schools have received detailed letters concerning the screening. Any assistance the school nurses could give in this endeavor would be appreciated: responding to questions concerning the importance of oral health to the overall health of the child; encouraging principals in sending home consent forms and having parents returning them in a timely fashion; helping move children from the classrooms to the screening room the day of the screening.

The school selected in your district is #Elementary (#Date time#). The principal is receiving a letter of notification, with the screening date and consent forms.

We believe the data collected in this survey will be of benefit to your community in determining future plans regarding specific oral health needs. Thank you for your dedication. We look forward to working with you. If you have questions, please feel free to contact me at (801) 538-6026.

Sincerely,

Peggy A Bowman, RDH Oral Health Program

Weighted Demographic Data

	Frequency	Percent
Age		
6	328	34.0%
7	292	30.4%
8	343	35.6%
Gender		
Male	461	47.8%
Female	503	52.2%
Race		
White	739	88.7%
Black	19	2.3%
Asian	36	4.3%
Hawaiian/Pacific Islander	14	1.7%
Native American	14	1.7%
Other	10	1.2%
Multi	1	0.2%
Ethnicity		
Non-Hispanic	528	83.1%
Hispanic	163	16.9%